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☐ 1. Document ID: US 20040019521 A1

L14: Entry 1 of 3

File: PGPB

Jan 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040019521

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040019521 A1

TITLE: System and method for advertising products and services on computer readable removable medium

PUBLICATION-DATE: January 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Birmingham, Robert K.	<u>Palm City</u>	FL	US	

US-CL-CURRENT: 705/14

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draw D
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☐ 2. Document ID: US 20030055689 A1

L14: Entry 2 of 3

File: PGPB

Mar 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030055689

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030055689 A1

TITLE: Automated internet based interactive travel planning and management system

PUBLICATION-DATE: March 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Block, David	Key Biscayne	FL	US	
Volny, Jaro	Key Biscayne	FL	US	
Brotz, Sharyn A.	Key Biscayne	FL	US	
Mueller, Scott Allen	Miami Beach	FL	US	

US-CL-CURRENT: 705/5; 382/115, 705/1, 705/13, 705/18, 705/50, 713/200

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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☐ 3. Document ID: US 20020055924 A1

L14: Entry 3 of 3

File: PGPB

May 9, 2002

PGPUB-DOCUMENT-NUMBER: 20020055924

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020055924 A1

TITLE: System and method providing a spatial location context

PUBLICATION-DATE: May 9, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Liming, Richard	Alexandria	VA	US	

US-CL-CURRENT: 707/100

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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L14: Entry 1 of 3

File: PGPB

Jan 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040019521

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040019521 A1

TITLE: System and method for advertising products and services on computer readable removable medium

PUBLICATION-DATE: January 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Birmingham, Robert K.	<u>Palm City</u>	FL	US	

APPL-NO: 10/ 266438 [PALM]

DATE FILED: October 7, 2002

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/398285, filed July 25, 2002,

Application is a non-provisional-of-provisional application 60/402619, filed August 12, 2002,

INT-CL: [07] G06 F 17/60

US-CL-PUBLISHED: 705/14

US-CL-CURRENT: 705/14

REPRESENTATIVE-FIGURES: 14

ABSTRACT:

A system, method and computer-readable removable medium for advertising products and services is disclosed. In an embodiment of the present invention, the computer-readable removable medium includes computer instructions for providing metadata associated with establishments located in a predefined geographical area that sell products and services. The computer-readable medium includes metadata associated with establishments that pay to be listed and establishments that do not pay to be listed. The computer-readable removable medium further includes computer instructions for searching establishments by name, type and location. The computer-readable removable medium further includes coupons for discounted products or services at the establishments that are listed. The computer-readable removable medium is a Compact Disc (CD) or a Digital Versatile Disc (DVD). In addition, the advertised establishments are any one of restaurants, hotels, movie theaters, nightclubs, retail shops and theme parks.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The subject matter of the present application is related to the subject matter of U.S. Provisional Application No. 60/398,285 entitled LetsGO and filed on Jul. 25, 2002 and U.S. Provisional Application No. 60/402,619 entitled Let'sGo and filed on Aug. 12, 2002, each of which are hereby incorporated by reference in their entirety.

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L14: Entry 2 of 3

File: PGPB

Mar 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030055689

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030055689 A1

TITLE: Automated internet based interactive travel planning and management system

PUBLICATION-DATE: March 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Block, David	Key Biscayne	FL	US	
Volny, Jaro	Key Biscayne	FL	US	
Brotz, Sharyn A.	Key Biscayne	FL	US	
Mueller, Scott Allen	Miami Beach	FL	US	

APPL-NO: 10/ 210182 [\[PALM\]](#)

DATE FILED: August 2, 2002

RELATED-US-APPL-DATA:

Application 10/210182 is a continuation-in-part-of US application 09/875454, filed June 6, 2001, PENDING

Application is a non-provisional-of-provisional application 60/210498, filed June 9, 2000,

INT-CL: [07] [G06 F 17/60](#), [H04 K 1/00](#), [H04 L 9/00](#), [G06 K 9/00](#), [H04 L 9/32](#), [G06 F 11/30](#), [G06 F 12/14](#)US-CL-PUBLISHED: [705/5](#); [705/1](#), [705/50](#), [705/13](#), [705/18](#), [382/115](#), [713/200](#)US-CL-CURRENT: [705/5](#); [382/115](#), [705/1](#), [705/13](#), [705/18](#), [705/50](#), [713/200](#)

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

An interactive rapid response Internet accessed air travel management system. The system includes a web-based planning and reservation interface system and an interactive access device. The system responds to details of a member's desired travel, to thereafter act in real time to contact the domains of associated travel service providers to arrange for every aspect of the member's trip, from airline and hotel reservations, ticket issuance, and ground transportation, to restaurant and theater reservations, and any other travel related needs of the member. The system stores identification information to verify access device possession to prohibit unauthorized use of the system and to provide security pre-clearance to system members.

RELATED APPLICATIONS

[0001] This Application is a continuation-in-part of application Ser. No. 09/875,474, filed Jun. 6, 2001, under the title "Automated Internet Based Interactive Travel Planning and Reservation System," which in turn is related to co-pending Provisional Application No. 60/210,498, filed on Jun. 9, 2000, under the title "AirportAmerica.com." Application Ser. No. 09/875,474 and Provisional Application No. 60/210,498 are incorporated herein by reference.

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L14: Entry 3 of 3

File: PGPB

May 9, 2002

PGPUB-DOCUMENT-NUMBER: 20020055924

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020055924 A1

TITLE: System and method providing a spatial location context

PUBLICATION-DATE: May 9, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Liming, Richard	Alexandria	VA	US	

APPL-NO: 09/ 761649 [PALM]

DATE FILED: January 18, 2001

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/176489, filed January 18, 2000,

INT-CL: [07] G06 F 7/00

US-CL-PUBLISHED: 707/100

US-CL-CURRENT: 707/100

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A software and hardware architecture operating across a local or wide area network providing an integral spatial location context. Such spatial location contexts form the foundation for location-enabled systems and transactions by integrating an extensible plurality of spatial and time reference systems and encodings; an accurate and precise metadata model; persistent identification; and a flexible digital security model. This application also teaches the use of such location-enabled systems and transactions to create methods and systems for automation, transaction processing, integration, and exchange of spatially relevant information over a communications network like the Internet.

REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims priority from U.S. Provisional Patent Application Ser. No. 60/176,189, filed Jan. 18, 2000, and the teachings of said U.S. Provisional Patent Application is incorporated by reference in its entirety.

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☐ 1. Document ID: US 20040073361 A1

L17: Entry 1 of 6

File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040073361

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040073361 A1

TITLE: Enhanced mobile communication device, and transportation application thereof

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tzamaloukas, Assimakis	San Jose	CA	US	
Farmwald, P. Michael	Portola Valley	CA	US	

US-CL-CURRENT: 701/210; 342/454, 701/209

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 2. Document ID: US 20030212996 A1

L17: Entry 2 of 6

File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030212996

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030212996 A1

TITLE: System for interconnection of audio program data transmitted by radio to remote vehicle or individual with GPS location

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wolzien, Thomas R.	Grandview	NY	US	

US-CL-CURRENT: 725/60

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 3. Document ID: US 20030171939 A1

L17: Entry 3 of 6

File: PGPB

Sep 11, 2003

PGPUB-DOCUMENT-NUMBER: 20030171939
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030171939 A1

TITLE: Method and apparatus for prescreening passengers

PUBLICATION-DATE: September 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yagesh, John Paul	Gaithersburg	MD	US	
Yagesh, Christopher John	Alexandria	VA	US	
Bender, Christopher Joseph	Arlington	VA	US	

US-CL-CURRENT: 705/1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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☐ 4. Document ID: US 20030109266 A1

L17: Entry 4 of 6

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109266
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030109266 A1

TITLE: Integrated journey planner

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rafiah, Moshe	London		GB	
Rice, James Robert	London		GB	
Ferguson, John Spencer Guy	London		GB	
Sadler, Andrew John	London		GB	
Harrison, Paul Richard	Surrey		GB	

US-CL-CURRENT: 455/456.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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☐ 5. Document ID: US 20030093419 A1

L17: Entry 5 of 6

File: PGPB

May 15, 2003

PGPUB-DOCUMENT-NUMBER: 20030093419
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030093419 A1

TITLE: System and method for querying information using a flexible multi-modal interface

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bangalore, Srinivas	Morristown	NJ	US	
Johnston, Michael	Hoboken	NJ	US	
Walker, Marilyn A.	Morristown	NJ	US	
Whittaker, Stephen	Morristown	NJ	US	

US-CL-CURRENT: 707/3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 6. Document ID: US 20020184304 A1

L17: Entry 6 of 6

File: PGPB

Dec 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020184304
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020184304 A1

TITLE: Wireless networked peripheral devices

PUBLICATION-DATE: December 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Meade, William K. II	Eagle	ID	US	
Tagg, James S.	Boise	ID	US	

US-CL-CURRENT: 709/203; 709/221

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040073361

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040073361 A1

TITLE: Enhanced mobile communication device, and transportation application thereof

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tzamaloukas, Assimakis	San Jose	CA	US	
Farmwald, P. Michael	Portola Valley	CA	US	

APPL-NO: 10/ 272039 [\[PALM\]](#)

DATE FILED: October 15, 2002

INT-CL: [07] [G01](#) [C](#) [21/34](#)

US-CL-PUBLISHED: 701/210; 701/209, 342/454

US-CL-CURRENT: [701/210](#); [342/454](#), [701/209](#)

REPRESENTATIVE-FIGURES: 3

ABSTRACT:

An enhanced mobile communication device communicates directly with other enhanced mobile communication devices in an ad-hoc mode over a wireless medium. The device transmits and receives packets of digital data. The packets of digital data are such that when transmitted, the probability that they will be received by the other mobile communication devices is increased. The probability is further increased by transmitting the packets a multiple and variable number of times according activity in the wireless medium. Attempts to transmit are made periodically and the period of transmission is adjusted according to activity in the wireless medium. In a transportation application, the packets comprise vehicle traffic congestion update information. The device maintains a traffic database and a map database. Traffic congestion update information is exchanged with other devices. Routes through the map from a source or current position of the device to a destination are computed according to an analysis of the traffic database.

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File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030212996

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030212996 A1

TITLE: System for interconnection of audio program data transmitted by radio to remote vehicle or individual with GPS location

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wolzien, Thomas R.	Grandview	NY	US	

APPL-NO: 09/ 834375 [\[PALM\]](#)

DATE FILED: April 13, 2001

RELATED-US-APPL-DATA:

Application 09/834375 is a continuation-in-part-of US application 09/573620, filed May 17, 2000, PENDING

Application 09/573620 is a continuation-of US application 09/054740, filed April 3, 1998, US Patent No. 6233736

Application 09/054740 is a continuation-of US application 08/597432, filed February 8, 1996, US Patent No. 5761606

Application is a non-provisional-of-provisional application 60/197314, filed April 14, 2000,

INT-CL: [07] [H04 N 5/445](#), [G06 F 3/00](#)

US-CL-PUBLISHED: 725/60

US-CL-CURRENT: [725/60](#)

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system and method for expediting the provisioning of goods/services to a user by providing directions from a current location for the user to a destination associated with an address embedded within or transmitted in conjunction with a programming signal. The system also utilizes user identifiers, payment information, user preferences and delivery instructions to expeditiously provide the goods/services to the user upon the user's arrival at the destination. The address provides an indication to an online information provider and/or a database within which a listing of goods/services provided by the provider and a listing of locations providing the goods/services. By comparing the various locations of the destination against the current location of the user, preferably determined using Global Positioning System data, the present invention determines which location of the destination is closest and provides directions thereto. Additionally, the

present invention may be CONFIG.d to utilize a MOBILE Transaction Enabling System (MOTES) for automatically communicating payment and other information for a user to a provider.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of application Ser. No. 09/573,620, filed May 17, 2000, which is a continuation-in-part of application Ser. No. 09/054,740, filed Apr. 3, 1998, which is a continuation of application Ser. No. 08/597,432, filed Feb. 9, 1996, now U.S. Pat. No. 5,761,606 the contents of both of which are incorporated herein by reference. This application also claims priority from provisional patent application Serial No. 60/197314, filed Apr. 14, 2000 the contents of which are incorporated herein by reference.

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File: PGPB

Sep 11, 2003

PGPUB-DOCUMENT-NUMBER: 20030171939

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030171939 A1

TITLE: Method and apparatus for prescreening passengers

PUBLICATION-DATE: September 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yagesh, John Paul	Gaithersburg	MD	US	
Yagesh, Christopher John	Alexandria	VA	US	
Bender, Christopher Joseph	Arlington	VA	US	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Millennium Information Systems LLC				02

APPL-NO: 10/ 055684 [\[PALM\]](#)

DATE FILED: January 23, 2002

INT-CL: [07] [G06](#) [F](#) [17/60](#)

US-CL-PUBLISHED: 705/1

US-CL-CURRENT: [705/1](#)

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system and method for monitoring and regulating the transportation of hazardous material. The system and method provides an integrated knowledge management system specifically configured for the tracking, monitoring and management of hazardous materials while in transit and permits real-time tracking using GPS (Global Positioning System) and GIS (Geographic Information System) technology that provides automatic alarms on the occurrence of conditions of concern such as deviation from planned route, proximity to sensitive sites (government facilities, power generating plants, bridges, military bases, airports, skyscrapers, shopping malls, sports arenas, etc.), unanticipated delays, driver alarm, discrepancies between registered and observed condition at weigh stations, convergence of multiple hazardous material shipments, and other potentially dangerous incidents or conditions. The system also includes a method and apparatus for the pre-screening of passengers scheduled to travel on a carrier to determine whether they pose a threat to the carrier.

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File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109266

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030109266 A1

TITLE: Integrated journey planner

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rafiah, Moshe	London		GB	
Rice, James Robert	London		GB	
Ferguson, John Spencer Guy	London		GB	
Sadler, Andrew John	London		GB	
Harrison, Paul Richard	Surrey		GB	

APPL-NO: 10/ 204934 [\[PALM\]](#)

DATE FILED: October 18, 2002

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
GB	0002985.0	2000GB-0002985.0	February 9, 2000

PCT-DATA:

DATE-FILED	APPL-NO	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
Feb 2, 2001	PCT/GB01/00441				

INT-CL: [07] [H04](#) [Q](#) [7/20](#)

US-CL-PUBLISHED: 455/456; 455/422

US-CL-CURRENT: [455/456.1](#)

REPRESENTATIVE-FIGURES: 8

ABSTRACT:

An integrated journey planner, or Comparison Navigator.TM., for providing travel information for a user specified journey comprises means for deconstructing a user enquiry specifying the journey into a plurality of information requests, each specifying a part of the journey using a single mode of transport, such as rail, car or coach. The Navigator also comprises means for sending each request to an appropriate one of a plurality of local and on-line databases, which each hold travel information regarding a different mode of transport. Further means are provided for reconstructing the responses to the requests received from the plurality of local and on-line databases into at least one multi-modal travel

option, for the user specified journey, incorporating different modes of transport. Usually, the multi-modal travel option incorporates timetable travel information such as train timetables and non-timetable travel information. The Navigator can also implement uni-modal point to point travel where the user can specify any geographical location and a mode of transport with the most suitable terminals and services being determined.

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File: PGPB

May 15, 2003

PGPUB-DOCUMENT-NUMBER: 20030093419

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030093419 A1

TITLE: System and method for querying information using a flexible multi-modal interface

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bangalore, Srinivas	Morristown	NJ	US	
Johnston, Michael	Hoboken	NJ	US	
Walker, Marilyn A.	Morristown	NJ	US	
Whittaker, Stephen	Morristown	NJ	US	

APPL-NO: 10/ 217010 [PALM]

DATE FILED: August 12, 2002

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/370044, filed April 3, 2002,

Application is a non-provisional-of-provisional application 60/313121, filed August 17, 2001,

INT-CL: [07] G06 F 7/00

US-CL-PUBLISHED: 707/3

US-CL-CURRENT: 707/3

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system and method of providing information to a user via interaction with a computer device is disclosed. The computer device is capable of receiving user input via speech, pen or multi-modally. The device receives a user query regarding a business or other entity within an area such as a city. The user query is input in speech, pen or multi-modally. The computer device responds with information associated with the request using a map on the computer device screen. The device receives further user input in speech, pen or multi-modally, and presents a response to the user query. The multi-modal input can be any combination of speech, handwriting pen input and/or gesture pen input.

PRIORITY APPLICATION

[0001] The present invention claims priority to provisional Patent Application No. 60/370,044, filed Apr. 3, 2002, the contents of which are incorporated herein by reference. The present invention claims priority to provisional Patent Application No. 60/313,121, filed Aug. 17, 2001, the contents of which are incorporated herein by reference.

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File: PGPB

Dec 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020184304

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020184304 A1

TITLE: Wireless networked peripheral devices

PUBLICATION-DATE: December 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Meade, William K. II	Eagle	ID	US	
Tagg, James S.	Boise	ID	US	

APPL-NO: 09/ 871965 [PALM]

DATE FILED: June 4, 2001

INT-CL: [07] G06 F 15/16, G06 F 15/177

US-CL-PUBLISHED: 709/203; 709/221

US-CL-CURRENT: 709/203; 709/221

REPRESENTATIVE-FIGURES: 4

ABSTRACT:

An apparatus for, and a method of, organizing and utilizing networked peripheral device include peripheral devices, which are aware of their respective geographical location and operational capabilities, and self-organization of the peripheral devices into a cluster of networked peripheral devices based on the operational capability of each respective peripheral device and the relative physical proximity with respect to each other. The host computer is also made aware of its geographical location. One or more peripheral device(s) that are optimally suited to fulfill the request is selected based on the physical proximity of the selected peripheral device(s) to the requesting user host computer and/or the capabilities of the selected peripheral device(s). The selection of the optimal peripheral device(s) is made by the networked peripheral devices without requiring the user of the host computer to know the topology of the network, e.g., the locations and capabilities of each of the networked peripherals. Device driver(s) for the selected peripheral device(s) may be dispensed to the host computer as required in order for the host computer to utilize the selected peripheral device(s). In an embodiment, the host computer may include its geographical location in a request for a peripheral device service. The service request including the geographical location information of the user host computer may enable an on-line service provider, e.g., a provider of an on-line printing service, to direct the service request to the closest service center that may be able to fulfill the request by the user.

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Brief Summary Text (15):

According to a preferred embodiment of the invention, the interactive multimedia tour guide is implemented using a GPS (Global Positioning Satellite) system enabled map program with a GIS (Geographic Information System) database running on a computer. Tour data are prepackaged and stored on computer readable media, and this data may be correlated to a hard cover book that describes the tours. The data may be updated online by down loading data from Internet Web sites prior to taking a tour. In addition, for those destinations having a Web site, the interactive multimedia tour guide may access that Web site via a wireless phone, such as a cell phone, on approach to the destination as determined by the GPS system.

Brief Summary Text (16):

The interactive multimedia tour guide can be used in several ways. First, the interactive multimedia tour guide can be used in a home computer system to preview tours, much as a hard cover book equivalent would be used, by accessing the GIS database. One advantage over a hard cover book is that the computer system can be connected via the Internet to a Web site that will provide the latest information on the destinations in a tour being reviewed. Such information might include opening times, admission prices and discounts, amenities, and the like which may change from time to time and season to season. The text of the tour description includes hyperlinks to those destinations having Web sites so that the latest information provided by the destinations themselves may be accessed. The user can select a tour and, by means of a print icon displayed on the computer screen, open a menu to select a print out of a map of a tour and printed text description of tour highlights, as updated by access to one or more Web sites. With this information, the user may then go on the selected tour. However, rather than print the tour, the user can download the tour to a Personal Digital Assistant (PDA) having an attached GPS module. Now the user is able to take the tour using the convenience of the PDA with the added guidance provided by the GPS module.

Brief Summary Text (17):

All the tours include various other points of interest in addition to the primary destinations in a given tour. The primary destinations are referred to as principle points of interest. These are the "backbone" of the tour; that is, other points of interest hang on this backbone. The other points of interest are referred to as ancillary points of interest and also would be identified on the printed tour map and accompanying text. The user has the ability to customize the tours to his or her own personal preferences. The interactive multimedia tour guide provides a series of menus that seeks to develop a profile of the user as well as direct answers to the user's personal likes and dislikes. This might occur in the process of loading the interactive multimedia tour guide on the user's personal computer for the first time, but might be subsequently updated at any time by the user,

perhaps to include the preferences of a traveling companion. Thus, while there may be a great deal of information in the database of the interactive multimedia tour guide about many ancillary points of interest which are not the primary subject of a particular tour, only those ancillary points of interest which correspond to the preferences of the user, or the user and the user's companion(s), would be included in the printed map and accompanying text.

Brief Summary Text (19):

Once a tour has been selected, however, a second way the interactive multimedia tour guide can be used is on the tour itself. A GPS receiver and GPS enabled map program are required. To support the full range of user interaction with the computer system, the computer system also requires a microphone, speaker, a voice recognition system, and a speech synthesis system with a text to speech module. Since one preferred environment for the interactive multimedia tour guide is a private automobile, the speakers of the automobile's stereo system may be used, and for those automobiles with integrated GPS systems, the GPS receiver can also be used. It is even possible to fully integrate the computer system in the automobile, but this is not necessary as a portable or laptop computer system or a pocket computer system or PDA may be used, allowing the interactive multimedia tour guide to be easily transferred from one automobile to another or carried by the user. This portable electronic system can be easily moved from one automobile to another, avoiding the incompatibilities of various proprietary integrated GPS navigation systems in different makes of automobiles. Moreover, a user might fly to a particular destination and use the interactive multimedia tour guide in a rental car.

Brief Summary Text (21):

In this second mode of operation, the portable electronic system displays a map of the selected tour and the location of the GPS receiver (i.e., the location of the user or the automobile) on the map. Once a tour is initiated, the portable electronic system displays a map, showing the user's current location, and provides audible directions en route. For greater map detail, the user can voice the command "ZOOM IN" to better show the immediate surroundings of the user's current location. This command can be repeated multiple times, to the limit of the resolution of the map. Likewise, the user can voice the command "ZOOM OUT" to provide a better perspective of the user's location on the selected tour. Similarly, the voiced commands "PAN RIGHT", "PAN UP", etc. can be used to pan the displayed map in a desired direction.

Brief Summary Text (22):

En route, the portable electronic system also provides audible descriptions of ancillary points of interest, offering the user the option of visiting any of the ancillary points of interest. The user can alter the tour in progress by voicing the command "DIRECTIONS" followed by any one of the principle points of interest on the tour. The computer system responds to this command by activating the speech synthesis system to provide audible directions from the user's current location to that point of interest, thereby allowing the user to modify the tour at will. In addition, there may be amenities along the route, which are not specifically in the tour or even mentioned during the tour, for which the user may require directions. An example might be the currently closest fast food establishment to satiate the appetites of young children in the automobile. The map database contains such information, and the computer system can provide the audible directions when requested.

Drawing Description Text (5):

FIGS. 3A to 3E, taken together, form a flow diagram showing the logic of the process of previewing tours for selection, customization, updating information in the database and, after selection and/or customization, printing a selected tour map with accompanying text;

Detailed Description Text (7):

FIG. 2 is a flow diagram showing the process by which the user's preferences are determined. From these preferences, a preference mask is generated. This preference mask is used to make a selection of those ancillary points of interest that may be most interesting to the user. This process is done on initial program load, but may be done again at a later time, either to update the user's preferences or to include the preferences of a traveling companion. The process starts in function block 201 which displays a screen in which the user is prompted to enter information about himself or herself. This information may include, for example, the user's age, gender, ethnic origin, level of education, field of education, vocation, hobbies, special interests, and the like. This is the objective data used to generate a profile of the user which, in turn, is used to select those ancillary points of interest which may be of most interest to the user. Since this information may be considered sensitive to the user, the various fields may be made optional, allowing the user to opt out of entering the information. However, to provide the best tours for the user, it is preferable to encourage the user to input the information, which may be encrypted and securely stored so that the information may not be accessed when a Web site is accessed on the Internet. In decision block 202 a test is made to determine if all the information requested has been entered or, optionally, whether the user has entered all the information he or she desires to enter and opted not to enter certain other information. If not, the process waits in function block 203 until the user has completed entering profile information. When the user has completed entering profile information, the process then goes to function block 204 which displays another screen in which the user is asked to rate various types of points of interest, such as museums, parks and gardens, historic houses, amusements, types of restaurants and lodgings, etc. This rating system may be, for example, on a point system of one to five, with five indicating a high interest and one indicating a low interest. This is the subjective data used to generate the profile of the user which, in turn, is used to select those ancillary points of interest which may be of most interest to the user. In other words, both objective and subjective data is used to generate the user profile. A determination is then made in decision block 205 as to whether the user has completed rating the various types of points of interest and, if not, the process waits in function block 206 until the user completes the rating process. Once the rating process is completed, the information input by the user is analyzed in function block 207 to generate a user profile. The process of analyzing the user's profile may include an expert system. The result of the analysis is then used to generate in function block 208 a "mask" of preferences that will later be used to select ancillary points of interest to be presented to the user on a selected tour, along with the principle points of interest. This mask of preferences is then stored in function block 209 on hard drive 112 of the computer system shown in FIG. 1 for later access. The user may wish to include one or more travel companions who may each go through the process shown in FIG. 2, in which case there would be separate masks of preferences for each such travel companion and these would be stored on the hard drive 112 for later access. Thus, in the process of selecting a tour, the user may indicate that he or she is traveling with one or more companions, each having a stored mask of preferences. As will be seen in the selection process shown in FIGS. 3A to 3E, these various masks of preferences will be accessed to determine the points of interest selected from the GIS database for presentation during the tour.

Detailed Description Text (9):

Turning now to FIG. 3A, the process of selecting a tour begins at function block 301 where a screen is displayed showing the various tours grouped in some fashion, as for example by geographical location or theme. To illustrate, suppose the tour guide were for wineries. The state or country or region which is covered by the tour guide would be divided into geographical locations, e.g., north east, south, etc., and within each grouping by geographical location would be a number of pre-packaged tours of, say, three wineries which could be selected as a day trip. In another example, suppose the user were planning a trip to Paris and hoped to

sightsee in both the city and its environs. In this case, tours might be grouped by geographical location, say quadrants, within the city and by day trips out of the city. Rather than geographical location, the suggested tours might be grouped according to theme; e.g., politics, art, history, etc. Of course, other groupings of selected tours are also possible. In any case, the user would be prompted to select one of the groups of tours. A determination is made in decision block 302 as to whether a group of tours has been selected and, if not, the process waits in function block 303 until a selection has been made. Once the user makes a selection of a group of tours, the process goes to function block 304 where a screen is displayed showing the suggested tours in the selected group. Again, the user is prompted to make a selection of one of the suggested tours. A determination is made in decision block 305 as to whether the user has selected one of the displayed suggested tours and, if not, the process waits in function block 306. When the user selects a suggested tour, a slide-show presentation of the principle points of interest for that tour is accessed and displayed to the user in function block 307. The presentation may include a map of the tour, still pictures and video and audio clips to better provide the user with a preview of what is in store if this tour is finally selected as the tour the user wants to go on. At the end of the slide-show presentation, the user is given several options. In decision block 308, determination is made as to whether the user has made the previewed tour his or her final selection. If not, the user has the option of returning to the screen displayed in function block 304 to select another tour to preview, and this is detected in decision block 309. The user also has the option of selecting one or more of the principle points of interest of one or more previewed tours to make his or her own customized tour. This is detected in decision block 310, in which case a list of those principle points of interest which have been viewed in the previewed tours is displayed to the user in function block 311. This display includes boxes to check (or uncheck) in order to select the principle points of interest which the user would like to have included in his or her customized tour. The user is then prompted in function block 311 either to select the customized tour, return to the suggested tours in function block 304, or to exit the process. The first option is detected in decision block 312, in which case the customized tour is stored in function block 313 and the process goes to function block 315 in FIG. 3B. The second option is detected in decision block 309, in which case the process goes back to function block 304; otherwise, the option of exiting is detected in decision block 314. If the last choice is chosen by the user, the process ends

Detailed Description Text (15):

If the print icon is selected, as determined in decision block 343, the tour map is printed in function block 344 with accompanying text including detailed directions to the principle points of interest of the tour and ancillary points of interest along the way. Also printed would be the amenities, such as inns, bed-and-breakfasts, motor lodges, and camp grounds as well as restaurants, cafeterias, fast food establishments, convenience stores, and the like. At this point, the user has a printed version of a custom tour which can be used conventionally.

Detailed Description Text (19):

The basic components of the portable self-contained electronic system are shown in FIG. 5. These are a GPS receiver 51, a hand-held display 52, a system unit 53, a wireless mobile telephone 54, such as a cell phone or other personal communication service, a power supply 55, a carrying case 56, and an optional digital camera 57. Since this is an interactive system, there needs to be both microphone and speaker to permit the user to communicate with the interactive multimedia tour guide. The microphone and speaker are also used for the telephone 54 in hands free operation. For pedestrian tours, the microphone and speaker may be incorporated into an optional headset 58. The headset 58 may be integrated into a pair of glasses, say sun glasses, or a hat, if desired to be less conspicuous when in use, or simply used as is. For automobile tours, the microphone may be incorporated into the display 52 and the speakers may be incorporated into the system unit 53. When the headset 58 is being used, the microphone in the display 52 and the speakers in the

system unit 53 are disabled. Optionally, the system unit may be provided with a low power radio frequency (RF) transmitter which transmits at a frequency in an unused portion of the amplitude modulation (AM) or frequency modulation (FM) radio bands, allowing the user to tune the automobile radio to that frequency and, thus, use the speakers in the automobile. The power supply 55 may include a battery, a battery charger and a 12 volt power adapter, the latter being used to connect to an automobile's power connector when used for an automobile tour. The display 52 may be provided with a clip allowing it to be attached to a vent or other convenient place on an automobile dashboard or to the user's belt or the carrying case 56. The display 52 is a convenient size to be hand held and includes a flat panel color display 521, such as a liquid crystal display (LCD), and a set of control buttons, including a PDA/MAP mode button 522, a power on/off switch 523, a location button 524, a zoom in/out wheel 525, and panning roller ball 526. Other manual switch functions could be provided or alternative switch arrangements used, but the intent here is to keep the user interface simple. In addition, for a built-in personal digital assistant (PDA) function of the display 52, a stylus may be provided to allow the user to input information or make menu selections. The system unit 53 incorporates a CD/DVD drive which is accessed by a slot 531. Additionally, connections are provided for each of the GPS receiver 51, the display 52, the cell phone 54, and the headset 58. The carrying case 56 has pockets to receive, in addition to the user's own travel accouterments, the GPS receiver 51, the system unit 53, the power supply 55, and accessories and may take any of several convenient forms including a small attache case, which would be suitable for moving the system from one automobile to another, or a small backpack, as shown, which would be suitable for pedestrian and bicycle tours. The optional digital camera 57 includes a calendar/clock for date and time stamping of digital image(s) or video clips, a built-in GPS receiver to provide location information of digital image(s) or video clip(s) and a built-in digital compass to provide orientation information of digital image(s) or video clip(s). The camera is provided with transceiver to allow communication with the system unit 53. The transceiver operates on an industry standard, such as the Bluetooth standard; however, the particular wireless standard used is not critical to the practice of the invention.

Detailed Description Text (20):

An alternative to the camera 57 is a camera attachment 42 for the PDA 40, shown in FIG. 4. Alternatively, the camera attachment 42 could be used on the display 52 shown in FIG. 5. One possibility is that the PDA 40 be used as the display 52, in which case, the display 52 would be detachable from the system unit 53 and the camera attachment added. In addition, a GPS receiver would be built into camera attachment 42 to provide substantially the same functionality as the optional digital camera 57. In order to provide orientation information, the camera attachment 42 would additionally include a digital compass. If the PDA 40 is used as the display 52, it needs to be provided with the switch functions of the display. This can be most conveniently done in software to provide a display of switches performing those functions. Alternatively, the display 52 may be a specially designed PDA having all the functions of the PDA 40 plus the additional switch functions described.

Detailed Description Text (27):

Once the user's current location is determined, a map showing the user's location relative to the first or next point of interest in the tour is displayed in function block 807. The user can use the zoom in/out wheel 525 to zoom in and out in the displayed map and can use the roller ball 526 to scroll the map vertically and horizontally. Alternatively, the user can voice the commands "ZOOM" or "PAN" followed by the direction to accomplish the same purpose, such as "ZOOM RV" or "ZOOM OUT" and "PAN RIGHT" or "PAN UP", etc. Ordinarily, this will not be necessary, at least for the initial map display. The directions are provided in audio/visual form in function block 808. The audio form of the directions are verbal directions generated by the speech synthesis program triggered by location and proximity to a turn or landmark. The visual directions, in addition to the

displayed map, are in the form of an arrow pointing up for straight ahead or left or right, indicating a turn at the next intersection.

Detailed Description Text (35):

FIGS. 10A to 10D, taken together, show the flow diagram of the process implemented for the optional digital camera 57 (FIG. 5) or the camera accessory 42 (FIG. 4) if used on the system shown in FIG. 5A. In the this process, the camera, which may be either a still camera or a video camera, can be either in communication with the system unit 53 (FIG. 5) or not. In the former case, identification and description information is contemporarily stored with the images or video clips, whereas in the latter case, identification and description information is added in a later process with the system unit. While communication between the camera 57 and the system unit 53 can be accomplished by means of a cable connection, this is generally not desirable. In the preferred embodiment, a wireless connection between the camera 57 and the system unit 53 is made using, for example, the Bluetooth standard. The particular wireless standard used, however, is not critical to the practice of the invention. Typically, the camera 57 will be in communication with the system unit 53 when the user is a pedestrian or bicyclist wearing the carrying case 56 as a backpack or fannypack. In this situation, the camera 57 and the system unit 53 will be in close proximity, facilitating the wireless communication link between the two. If the portable electronic system is being used in an automobile, the portable electronic system will remain in the automobile while pictures are being taken and, depending on the distance of the camera 57 from the system unit 53, the camera 57 may lose its communication link with the system unit 53. The camera 57 includes a calendar/clock which is used to date and time stamp digital image(s) or video clips. In addition, the camera 57 is preferably equipped with its own GPS receiver so that location information can be stored with digital image(s) or video clips. In other words, the camera 57 does not have to rely on the location information from GPS receiver 51, which is important if the communication link between the camera 57 and the system unit 53 is broken. One additional piece of information. is also required for one feature of the invention and that is orientation information. For this, the digital camera is equipped with a digital magnetic compass. Thus, when pictures or video clips are taken with the camera, information on the orientation of the camera is also stored with the digital image(s) or video clips. If the optional implementation shown in FIG. 5A is used, a communication link will always be maintained since the units are integral.

Detailed Description Text (36):

Referring first to FIG. 10A, the process begins in function block 1001 when the camera is activated. As the camera is activated, either by releasing the shutter if a still camera or by triggering the camera on if a video camera, date and time information are automatically stored with the digital image(s) in function block 1002. Location information is also available from the camera's GPS receiver, and this information is also stored with the digital image(s) in function block 1003. In many cases, this location information is enough to make an accurate determination of the subject of the picture or video clip, but additional information is often required to make a more accurate determination and that is supplied by orientation information. This information is supplied by the built-in digital compass in the camera. The orientation of the camera is therefore recorded with the digital image(s) in function block 1004. A determination is made in decision block 1005 as to whether the camera is currently in communication with the system unit. If not, the process goes to FIG. 10C, described below. However, if the camera is currently in communication with the system unit, the GIS database stored on the hard drive of the system unit 53 is accessed in function block 1006, and a tentative determination of the likely subject of the digital image(s) or video clip is made in function block 1007. This system then activates the speech synthesizer and audibly announces to the user the subject tentatively determined in function block 1008.

CLAIMS:

18. A portable self-contained interactive multimedia tour guide comprising: means for storing at least a selected tour from a Geographic Information System (GIS) database of packaged tours, the selected tour being comprised of principle points of interest and ancillary points of interest, the ancillary points of interest not being the primary subject of the selected tour; a Global Positioning Satellite (GPS) receiver generating location information; a central processing unit (CPU) receiving said location information and accessing said GIS database; a display controlled by the CPU to display a map showing a current location relative to the selected tour, and a speech synthesis function controlled by The CPU to provide audible directions and information about points of interest as the selected tour progresses and audible prompts to a user, wherein the CPU is programmed to allow the user to modify the selected tour while in progress.

40. A camera comprising: means for recording an image, a Global Positioning Satellite (GPS) receiver for generating location information at a time when the image is recorded; a digital compass for generating orientation information at the time when the image is recorded; a Geographic Information System (GIS) database storing points of interest; and database search means for searching the GIS database using said location and orientation information generated at the time when the image is recorded to identify a probable subject of the image.

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